

California Regional Water Quality Control Board

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December 24, 2008

Ms. Billee Calabrese, Manager of Operations Skyline Ranch Country Club 18218 Paradise Mountain Road Valley Center, CA 92082 **CERTIFIED MAIL**

Registration Number: 7008 0150 0003 7457 7998

in reply refer to: CIWQS257379

Dear Ms. Calabrese:

SUBJECT: ADDENDUM NO. 1 TO ORDER NO. R9-2005-0258

Enclosed is a copy of Addendum No. 1 to Order No. R9-2005-0258, which was adopted by the California Regional Water Quality Control Board, San Diego Region (Regional Board) on December 10, 2008. This Addendum prescribes requirements for the discharge and use of recycled water for golf course irrigation at the Skyline Ranch Country Club. The requirements in the adopted Addendum are consistent with the tentative Addendum as modified by the errata sheet, which was sent to you for review prior to the hearing.

All monitoring specified in Section III of Addendum No.1 must be initiated on the day that the discharge to the golf course begins. Records of monitoring information shall include: a) the date, exact place, and time of sampling or measurements, b) the individual(s) who performed the sampling or measurements, c) the date(s) analyses were performed, d) the individual(s) who performed the analyses, e) the analytical techniques or method used, and f) the results of such analyses. This information must be included in the facility's quarterly monitoring report on forms approved by the Regional Board's Executive Officer.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to." In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

If you have any questions, please contact Mr. Bob Morris at (858) 467-2962 or email at bmorris@waterboards.ca.gov.

Sincerely,

Julie Chan

Supervising Engineering Geologist

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JC:rwm

Enclosure: Addendum No. 1 to Order No. R9-200

California Environmental Protection Agency

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN DIEGO REGION

ADDENDUM NO. 1 TO ORDER NO. R9-2005-0258

AN ADDENDUM PRESCRIBING REQUIREMENTS FOR THE DISCHARGE AND USE OF RECYCLED WATER FOR LANDSCAPE IRRIGATION AT SKYLINE RANCH COUNTRY CLUB SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

- 1. Order No. R9-2005-0258 establishes waste discharge requirements for the disposal by Skyline Ranch Country Club, LLC. (hereinafter Discharger) of up to 0.030 million gallons per day (MGD) of undisinfected secondary recycled water to a 15-acre field that has restricted access to the public.
- 2. On May 21, 2007, the Discharger submitted a Report of Waste Discharge, requesting modification of Order No. R9-2005-0258 to prescribe requirements for the discharge of up to 0.045 MGD of disinfected tertiary recycled water and its use for landscape irrigation of the golf course at the Skyline Ranch Country Club (SRCC). This project will reduce demand for imported water supplied by Valley Center Municipal Water District to the Discharger. The Report of Waste Discharge, which included the Title 22 Engineering Report, was deemed complete on May 1, 2008.
- 3. The upgrade of the SRCC treatment plant to tertiary treatment included converting the activated sludge process to a membrane bioreactor (MBR) system that utilizes membrane filtration in place of clarification, installing of a chlorine disinfection unit, and constructing an emergency storage facility. As documented in the Report of Waste Discharge, the upgraded treatment facility has a hydraulic capacity of 0.045 MGD, under normal operating conditions. A new recycled water pipeline was installed to direct the tertiary effluent to the golf course.
- 4. The Title 22 Engineering Report for the project, prepared by Invirotreat Inc., business management consultants for the Discharger, has been approved by the Department of Public Health.
- 5. The Department of Public Health has accepted the Tracer Study Protocol for the project, finding that it includes acceptable methods and procedures to determine the Modal Contact Time (MCT).
- 6. This Regional Board, acting in accordance with Section 13244 of the California Water Code, adopted the Water Quality Control Plan for the San Diego Basin (9), (hereinafter Basin Plan) on September 8, 1994. The Basin Plan was approved by

the State Water Resources Control Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Water Resources Control Board. The Basin Plan contains beneficial uses and water quality objectives.

- 7. A discharge in compliance with Order No. R9-2005-0258 as amended by this Addendum will be consistent with the standards, policies, and regulations established in the Basin Plan for the achievement of water quality objectives by recycled water dischargers.
- 8. In establishing the requirements contained herein the Regional Board considered factors including, but not limited to, the following:
 - a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose,
 - b. Other waste discharges,
 - c. The need to prevent nuisance,
 - d. Past, present, and probable future beneficial uses of the hydrologic subunits under consideration.
 - e. Environmental characteristics of the hydrologic subunits under consideration,
 - f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area,
 - g. Economic considerations,
 - h. The need for additional housing within the region, and
 - i. The need to develop and use recycled water.
- 9. In accordance with the Memorandum of Agreement between the Department of Public Health and the State Water Resources Control Board on the use of recycled water, this Order incorporates any conditions of approval submitted as part of the Department of Public Health's recommendations into water recycling requirements proposed for adoption by this Regional Board.
- 10. The Regional Board considered all environmental factors associated with the treatment and use of recycled water at Skyline Ranch Country Club. A draft Negative Declaration was circulated for public comment as required by California Environmental Quality Act (CEQA). No significant environmental effects were identified and the Negative Declaration for the project was certified by the Regional Board on December 10, 2008.
- 11. The Regional Board has notified the Discharger and all known interested parties of its intent to amend Order No. R9-2007-0038 for the use of recycled water by the Discharger.
- 12. The Regional Board in a public meeting, heard and considered all comments pertaining the proposed discharge of recycled water.

IT IS HEREBY ORDERED THAT, Skyline Ranch Country Club LLC. (hereinafter Discharger), in order to meet the provisions contained in Division 7 of the California Water Code and Regulations adopted thereunder, shall comply with Order No. R9-2007-0038 as supplemented with the following requirements for the discharge and use of disinfected tertiary effluent:

I. Discharge Specifications

- 1. Effluent from the Skyline Ranch Country Club wastewater treatment facility discharged for recycled water purposes shall be treated to the level of disinfected tertiary, in conformance with all applicable provisions of California Code of Regulations, Title 22, Division 4, Chapter 3 (Water Recycling Criteria) for the appropriate type of recycled water use (currently Sections 60303 through 60307, 60320, and 60320.5).
- 2. The median concentration of total coliform bacteria measured in the disinfected tertiary recycled water shall not exceed a most probable number (MPN) of 2.2 per 100 milliliter (mL), utilizing the bacteriological results of the last seven days for which analyses have been completed; and the number of total coliform bacteria shall not exceed an MPN of 23 per 100 mL in more than one sample in any 30-day period. No sample shall exceed a MPN of 240 total coliform bacteria per 100 mL.
- 3. The chlorine disinfection process shall provide a CT (chlorine concentration times modal contact time) value of not less than 450 milligram-minute (mg-min)/liter at all times with a modal chlorine contact time of at least 90 minutes based on peak dry weather design flow.
- 4. The turbidity of filtered recycled water shall not exceed any of the following:
 (a) An average of 2 Nephelometric Turbidity Unit (NTU) within a 24-hour period;
 - (b) 2 NTU daily average, 5 NTU more than 5 percent of the time, or
 - (c) 10 NTU at any time.
- 5. A coagulation system shall be used whenever the plant is producing tertiary treated wastewater for unrestricted use. For the purpose of maintenance and repair of the system, the Discharger is allowed to have the coagulation system off-line for short periods of time (up to 30 minutes for each occurrence), when the turbidity of the influent to the tertiary treatment plant is less than 5 NTU.
 - Coagulation need not be used as part of the treatment process provided the turbidity of the influent to the filters does not exceed 5 NTU more than 5 percent of the time.
- 6. The permeate cycle for the Membrane Bioreactor shall not be greater than the maximum value of 20 minutes and the relax cycle shall not be less than the minimum value of 1 minute during peak dry weather flow.

- 7. Peak dry weather flow at SRCC shall not exceed a total of 30.0 GPM through the chlorine contact basin.
- 8. The water level in the chlorine contact basin during peak dry weather flow shall be maintained at a minimum level of 9 feet 6 inches.
- 9. The chlorine contact basin effluent shall have a minimum chlorine residual of 3.0 mg/L at all times regardless of flow rate.
- 10. The baffle positions and over/under serpentine flow pattern present at the time of the tracer study shall, at all times, be maintained during the operation of the chlorine contact basin.

II. Recycled Water Use Provisions

- 1. The Discharger shall designate a recycled water supervisor who is responsible for the recycled water system. Specific responsibilities of the recycled water supervisor, at a minimum, shall include the following:
 - a. Proper installation, operation and maintenance of the irrigation system;
 - b. Control of the on-site piping to prevent any cross-connections with potable water supplies:
 - Development of and implementation of a set of procedures to verify on an ongoing basis that cross-connections have not occurred between potable water supplies and recycled water supplies;
 - d. Routine inspection and maintenance of backflow prevention devices installed to protect potable water supplies, consistent with section 7605 of Title 17, California Code of Regulations; and
 - e. General responsibilities to ensure compliance with the General Order, complete and continuous implementation of any Best Management Practices identified as necessary to prevent potential hazards to public health.
- 2. A copy of the facility operations manual shall be maintained at the treatment facility and shall be available to operation personnel and the Regional Board representatives at all times. The following portions of the operations manual shall be posted at the treatment plant as a quick reference for treatment plant operators:
 - a. Alarm set points for secondary turbidity, tertiary turbidity, and chlorine residual once established in the Reliability Plan described in Section D.3,

- Levels at which flow will be diverted for secondary turbidity, tertiary turbidity, and chlorine residual once established in the Reliability Plan described in Section D.3.
- c. When to divert flow for high daily and weekly median total coliform,
- d. When the authorities (Department of Public Health, County of San Diego Department of Environmental Health, and Regional Board) will be notified of a diversion.
- e. Names and numbers of those authorities to be notified in case of a diversion, and
- f. Frequency of calibration for turbidimeters and chlorine residual analyzers.
- 3. Use or installation of hose bibs on any irrigation system presently operating or designed to operate with recycled water, regardless of the hose bib construction or identification, is prohibited.
- 4. Application of waste constituents to the use area shall be at reasonable agronomic rates to preclude creation of a nuisance and minimize degradation of groundwater, considering soil, climate, and nutrient demand.
- 5. The seasonal nutritive loading of the Use Areas including the nutritive value of organic and chemical fertilizers and of the recycled water, shall not exceed the nutritive demand of the landscape.
- Land application areas that are spray irrigated and allow public access shall be irrigated during periods of minimal use (typically between 9 p.m. and 6 a.m.).
 Consideration shall be given to allow maximum drying time prior to subsequent public use.
- 7. All reclamation equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. All reclamation distribution system piping shall be purple or adequately wrapped with purple tape per section 116815(a) of the California Health and Safety Code.
- 8. Except as allowed under section 7604 of Title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water. Supplementing reclaimed water with potable water shall not be allowed except through an air-gap separation, or if approved by the Department of Public Health, a reduced pressure principle backflow device.
- 9. There shall be at least a ten foot horizontal and one foot vertical separation at crossings between all pipelines transporting reclaimed water and those transporting domestic supply, with the domestic supply above the reclaimed water pipeline, unless approved by the Department of Public Health.

- 10. All recycled water valves, outlets, and quick couplers should be of a type or secured in a manner that only permits operation by authorized personnel.
- 11. Any equipment or facilities, such as tanks, temporary piping or valves, and portable pumps, which have been used with recycled water should be cleaned and disinfected before removal from the approved use area for use at another job site.
- 12. The main shutoff valve downstream of the recycled water meter shall be tagged with a recycled water warning sign, and shall be equipped with an appropriate locking device to prevent unauthorized operation of the valve.
- 13. Signs with proper wording (in English and Spanish) of a size no less than four inches high by eight inches wide shall be placed at all areas of public access and around the perimeter of all areas of recycled water use or conveyance to alert the public of the use of recycled water. All signs shall display an international symbol similar to that shown in Attachment A and present the following wording:

"RECYCLED WATER—DO NOT DRINK"
"AGUA DE DESPERDICIO RECLAMADA—POR FAVOR NO TOME"

- 14. Recycled water shall be managed to avoid contact with workers. Employees and eating areas shall be protected against any contact with recycled water spray, mist, and runoff during the chemical stabilizer applications by water trucks with special rear spread sprayers or by hand when using commercialgrade hoses.
- 15. Best Management Practices (BMPs) shall be implemented to achieve a safe and efficient irrigation system. A list of some example BMPs applicable for many uses of recycled water for landscape irrigation is included in Attachment A.
- 16. Recycled water shall not be allowed to escape from the authorized use areas by airborne spray or by surface flow except in minor amounts such as that associated with BMPs for good irrigation practices.
- 17. Areas irrigated with recycled water shall be managed to prevent ponding and conditions conducive to the proliferation of mosquitoes and other disease vectors, and to avoid creation of a public nuisance or health hazard. The following practices shall be implemented, at a minimum:
 - a. Irrigation water must infiltrate completely within a 48-hour period.
 - b. Ditches receiving irrigation runoff, not serving as wildlife habitat, shall be maintained free of emergent, marginal, and floating vegetation.

- c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.
- 18. There shall be no application of recycled water within 50 feet, and storage of recycled water within 100 feet of a domestic well, unless approved otherwise by the Department of Public Health. There should be no application of recycled water within 50 feet of surface waters.

III. MONITORING & REPORTING REQUIREMENTS

- 1. Pursuant to California Water Code section 13529.2, any person who, without regard to intent or negligence, causes or permits an unauthorized discharge of 50,000 gallons or more of recycled water that has been treated to at least disinfected tertiary 2.2 recycled water or 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary 2.2 recycled water in or on any waters of the State, or causes or permits such unauthorized discharge to be discharged where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (1) that person has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify this Regional Board in accordance with reporting requirements in Standard Provision F.6.
- 2. Disinfected tertiary treated wastewater for unrestricted use shall be continuously sampled for turbidity using a continuous turbidity meter and recorder at a point prior to filtration and again following filtration. Turbidity measurements shall be based on a reading and recording of the turbidity strip charts or computer records at four-hour intervals at least once per day. Compliance with the daily average operating turbidity shall be determined by averaging the results of all four-hour turbidity samples read during the day.
- 3. The Discharger shall conduct periodic inspections of the reuse area to monitor and assure compliance with conditions of this Order. The Discharger shall also conduct regular inspections to assure cross connection are not made with potable water systems and air-gap devices are installed and operable.
- 4. Samples of the effluent shall be collected at a point downstream of the disinfection process, but prior to any dilution.
- 5. The Discharger shall determine the combined volume of recycled water used at the use site each calendar month in units of million gallons and report this volume quarterly.

6. The Discharger is responsible for monitoring and reporting in accordance with the following criteria:

Effluent Monitoring Requirements

Constituent	Units	Type of Sample	Sampling	Reporting						
			Frequency	Frequency ¹						
Turbidity ^{2,3}	NTU	Continuous	Continuous	Quarterly						
Chlorine Contact Time (CT) ⁴	Mg-min/L	Calculated	Continuous	Quarterly						
Total Chlorine Residual⁵	Mg/L	Continuous	Continuous	Quarterly						
Total Coliform ⁶	MPN/ 100 ml	Continuous	Continuous	Quarterly						

¹ Quarterly is defined as a period of three consecutive calendar months beginning on January 1, April 1, July 1, or October 1.

² Should the continuous turbidity meter and recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours.

³ Effluent turbidity analyses shall be conducted continuously using a continuous monitoring and recording turbidity meter. Compliance with the daily average operating filter effluent turbidity limit of 2 NTU shall be determined by averaging the recorded turbidity levels at a minimum of four-hour intervals over a 24-hour period. Compliance with the turbidity standard of not exceeding 5 NTU more than 5 percent of the time over a 24-hour period shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2 hours over a 24-hour period. Should the continuous turbidity meter and/or recorder fail, grab sampling at a minimum frequency of one sample every 1.2 hours may be substituted until the turbidity meter and/or recorder is fixed. The Discharger shall report monthly results of four-hour turbidity readings, average effluent turbidity (24-hours), 95 percentile effluent turbidity (24-hours), and the daily maximum turbidity (daily being defined as the 24-hour period from 12 am to 12 am). Continuous turbidity monitoring must also be provided prior to filtration to ensure adequate process control, and automatic actuated coagulant feed when the turbidity of the secondary treated effluent is greater than 10 NTU.

⁴ Calculated CT (chlorine concentration multiplied by modal contact time) values shall be determined and recorded continuously. The daily minimum CT value shall be reported monthly. The Discharger shall report monthly the date(s), value(s), time, and duration when the CT value falls below 450 mg-min/L, and/or the modal contact time falls below 90 minutes.

⁵ Chlorine concentrations shall be recorded by a continuous recording meter at a location in the pipeline where the effluent has experienced 90 minutes or more of modal contact time at maximum flow. Minimum daily chlorine residual shall be reported monthly.

⁶ Samples for total coliform bacteria shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures. Results of daily total coliform bacteria monitoring, running 7-day median determination, and maximum daily coliform reading in each of previous 12 months shall be reported monthly.

IV. NOTIFICATIONS

1. This Order becomes effective on the date of adoption by the Regional Board.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on December 10, 2008.

JOHN H. ROBERTUS Executive Officer

WDID No. 9 000000223 CIWQS Reg. Measure 358280

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN DIEGO REGION

RESOLUTION NO. R9-2008-0126

ADOPTION OF A NEGATIVE DECLARATION REGARDING POTENTIAL ENVIRONMENTAL IMPACTS FOR SKYLINE RANCH COUNTRY CLUB LLC. RECYCLED WATER PROJECT SAN DIEGO COUNTY

WHEREAS, the California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

- 1. In considering the issuance of Waste Discharge Requirements for the treatment of domestic wastewater by Skyline Ranch Country Club LLC. and the use of recycled water for landscape irrigation at the Skyline Ranch Country Club golf course located at 18218 Paradise Mountain Road, Valley Center, California, the Regional Board is required to comply with the provisions of Chapter 3 (commencing with section 21100) of Division 13 of the California Public Resources Code prior to the adoption of any waste discharge requirements; and
- 2. The Regional Board is functioning as the lead agency, which has the principal responsibility for approving the proposed project and is responsible for preparation of environmental documents; and
- 3. The Regional Board prepared an Initial Study for the project in accordance with the California Environmental Quality Act (CEQA; Public Resources Code, section 21000 et seq.) and the State CEQA guidelines (Title 14, California Code of Regulations, section 15000, et seq.); and
- 4. The environmental impacts of this project will be less than significant; and
- 5. The Regional Board has prepared a Negative Declaration pertaining to the proposed discharge of wastes; and
- 6. The proposed Negative Declaration was sent to the State Clearinghouse and local responsible agencies for review; and
- 7. No comments were received; and
- 8. A public notice that the Regional Board proposed to adopt a Negative Declaration was published in the San Diego Union Tribune in compliance with section 15072 of the State CEQA Guidelines.

THEREFORE, BE IT RESOLVED THAT, the Regional Board hereby adopts the Negative Declaration and certifies that the Negative Declaration reflects proper assessment of environmental impacts of the proposed upgrades to the Skyline Ranch wastewater treatment facility and use of recycled water, and that the environmental impacts of the project will be less than significant.

I, John H. Robertus, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the California Regional Water Quality Control Board, San Diego Region, on December 10, 2008.

JOHN H. ROBERTUS

Executive Officer

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